



# Public Health

Seattle & King County

HEALTHY PEOPLE. HEALTHY COMMUNITIES.

Alonzo L. Plough, Ph.D., MPH, *Director and Health Officer*

## WORKING HEALTHY

Food and Beverage Worker Manual

Food Worker Card Hotline: (206) 296-4791

### TABLE OF CONTENTS

» Why read this manual? .....	2
» Your own health comes first .....	2
» What makes people sick from food?.....	4
» Food temperatures.....	5
» Use wholesome food .....	10
» A clean workplace is safer .....	11
» Key points .....	13
» First aid for choking.....	14
» Definitions.....	15
» Public Health Centers .....	17
» Acknowledgments .....	17

#### Environmental Health Services Division

999 Third Avenue, Suite 700 □ Seattle, WA 98104-4039

T (206) 205-4394 F (206) 296-0189 □ [www.metrokc.gov/health](http://www.metrokc.gov/health)



City of Seattle  
Gregory J. Nickels, Mayor



King County  
Ron Sims, Executive

## » Why read this manual?

Think about a restaurant where you recently ate or worked. Was the hot food hot and the cold food cold? Did the server have clean hands? Was there soap in the restroom? And paper towels? Was there trash on the floors? Was the table, equipment or counter clean? Public Health - Seattle & King County notices these things because any place where food is prepared and served to the public must be kept safe. You, your friends and family are also the public, and should be interested in keeping a food business safe.

Why? Because people can get sick if food sits at room temperature, or if germs get into food or drinks. "Clean" is not the same as "safe." Hands can look clean, but if they have germs on them, they are not safe. Food can smell good, but if there are germs in it that are like poison, it is not safe. This is why all food workers, **like you**, must learn how to **prevent** illness with safe food and food service. **These safe habits will also help keep you and your family healthy.**

When you have read this manual, you are ready to take the Food Workers' Test. When you pass this test, you will receive a Food Worker Card; which is your permit to work in food service. After reading this, you will know how to:

1. Prevent **food poisoning** -- that could make someone sick.
2. Keep food at **safe temperatures**.
3. Prevent **contamination** of foods.
4. Check where safe, clean foods come from and how to store them.
5. Wash, rinse and **sanitize**.

After you pass your test, be sure to bookmark to these webpages and use it to remember how to handle foods safely. If something comes up that you cannot answer with this information, ask your boss or call Public Health - Seattle & King County Environmental Health Services. In Seattle and King County call the number of the health center or office closest to you. Click here for a list of Environmental Health centers. The health centers are also listed in the Blue Pages of the phone book under King County, Health Centers. If you are outside of King County, please call your local health department for help.

Be sure to check out the definitions that contain words and terms that explain safe food handling methods.

## » Your own health comes first

### Handwashing is very important.

Wash your hands often when working with food and drinks -- this gets rid of germs that can make people sick. Washing your hands well is one of the most important good health habits. It sounds too easy, but handwashing really works to wash away germs from your hands.

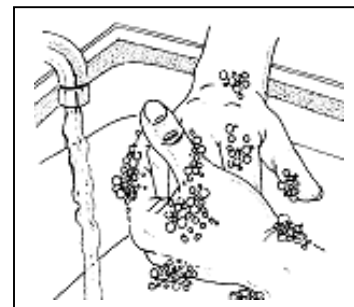
#### Remember to always wash your hands:

- **before** you touch anything used to prepare food,
- **before you put on disposable gloves.**
- **after** you work with raw meat, fish and poultry.
- **after** you handle trash and take out garbage.



### The best way to wash your hands is:

1. Wet your hands with warm water.
2. Use soap.
3. Rub your hands briskly together to loosen any dirt and germs. Pay special attention to your fingernails where germs can hide. Take plenty of time -- 20 seconds.
4. Rinse your hands under clean, warm water.
5. Dry your hands on a paper towel or with an air dryer.



### It's also really necessary to wash your hands:

- **after** you go to the bathroom (use the toilet); both men and women must do this, and it is very important!
- **after** you eat.
- **after** you touch your face, hair, or body.
- **after** you blow your nose, after you cough or sneeze, because you must cover your mouth.

Wash your hands after your break; and if you smoke, wash your hands afterwards.

**Your kitchen should have a handwashing sink with hot water, soap and paper towels. Do not use your apron or dishtowels to dry your hands.**

Germs, such as bacteria and viruses, grow easily, so think of your hands as always "contaminated." Just because they look clean does not mean they are clean. Germs are too tiny to see with your eyes. If you do not wash your hands in the right way, your hands can put germs in food, which gets eaten by your customers. They may then get sick from these germs. This is called "food borne illness" or "food poisoning".

### Work only when you are well

If you feel sick you should not go to work. The germs you bring to work can spread when you sneeze and cough, and when you touch food, dishes, counters, utensils, forks, knives and spoons, pots, pans, and other people.

- Do not work if you have a cold, flu, a runny nose or sore throat.
- Do not work if you have loose bowels (diarrhea).
- Do not work if you are throwing up (vomiting).
- Do not work if you have Hepatitis A. Tell your boss; someone must tell Public Health right away (call the office or health center nearest to you).
- Do not work with foods if you have an **infected** cut or a burn or a sore on your hand. If the sore is not infected, cover it with a bandage and wear a rubber or plastic glove.
- If someone at home is sick, be sure to wash your hands carefully before you start work. Washing your hands at home will also help prevent the spread of illness there.

### Take care of how you look and how you act

You want to look clean and be clean when you are at work. Your clothes must be clean, and your apron or uniform should be fresh.

As you know, it is not healthy to smoke or use any form of tobacco. If you use tobacco, do not smoke or chew it while you are working or when you are near



food or dishwashing areas. Smoke only while you are on a break. After you smoke, wash your hands with care before you return to work.

Keep your hair clean and neat. For your safety, wear it close to your head, tied back, or in a net or under a hat.

## » What makes people sick from food?

### Food borne illness

People can get sick when the food they eat has germs. Germs cause food borne illness or food poisoning. Some foods are more likely than others to grow germs that cause food poisoning; these are called potentially hazardous foods. Germs grow easily in foods like meat, fish, poultry and milk; they grow fast in refried beans, cooked rice and baked potatoes. These are all foods that are moist or damp, and they have protein that the germs need to grow. Germs also grow well in other foods kept warm in the "Danger Zone".



Is it part of your job to protect the food and stop germs from growing, so that no one will get food poisoning.

- First, wash your hands well.
- Second, Use barriers between your bare hands and ready-to-eat foods.
- Third, be sure the food is wholesome and protect it from germs.

There are different kinds of germs; bacteria are the most common. They are everywhere, they grow fast, and they may spoil food or cause food borne illness. Some bacteria make poison. Almost always the food looks and smells good, but it may have enough bacteria to make someone sick. (Two examples of this are potato salad that has not been kept cold enough, and chicken soup that has not been kept hot enough). One kind of bacteria that you may hear about is Salmonella; it is not named for a fish; in fact, it's not found in fish at all. It is in dairy foods, poultry and eggs, and it can cause very serious food poisoning.

A virus is another kind of germ that causes food poisoning; some viruses can travel through the air, in liquids and foods that a sick person touches. Hepatitis A is spread by a virus. Someone can have the virus and not know it. When a food worker with the virus does not wash her or his hands well after using the toilet, the virus is carried to the food the worker handles. This is one reason there is a law that all food workers **must** wash their hands.

Parasites are tiny worms or bugs that live in fish and meat. They die if they are frozen long enough or cooked long enough.

If you keep food very hot or very cold, out of the "Danger Zone", germs will not grow.

Chemicals, such as rat bait or cleaners, can cause some food poisoning. You must be sure to keep all chemicals away from food.

### What to do if you or a customer gets sick from food

When people get sick from food, they may feel like they want to throw up (nausea), they may throw up (vomit), they may have chills, cramps (pain in their belly), loose bowels (diarrhea); they may have a fever.

Here is what you must do right away if you or a customer gets sick from food:

- Call the nearest office of the Public Health office.
- Save the food that may be causing the sickness. Do not serve that food. Do not throw out any food until Public Health tells you to. Mark it clearly and put it in the refrigerator.

You should report all food borne illness to Public Health--those at work, at home, at church, on picnics. Someone from the Public Health Department will help you to find out how it happened, and how to prevent it in the future.

If someone needs first aid for choking, see the "First Aid for choking" section to learn what to do when this happens.

## » Food temperatures

When you eat out, you eat foods that are made by someone else. You trust them to make it safe for you to eat. Now you will be preparing food for other people, and they will trust you to do all that you can to keep them from getting sick.

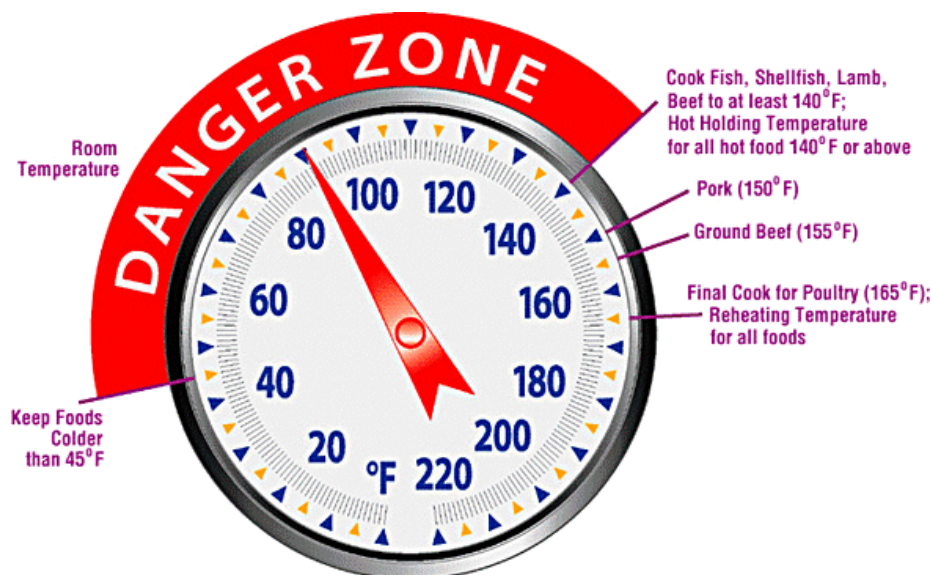
You need to carefully prepare food that you will serve or sell. You will wash raw vegetables; you will cook, cool, reheat, freeze and thaw food. You must keep germs that are already in the food from growing and causing food poisoning. **Washing your hands carefully, and cooking and cooling foods the right way, are the most important things you can do to help keep your customers healthy.** Be sure you understand this part, and do these things at work and at home. Your good habits will keep you, your customers and your family safe.

### Temperature control

This section is about how to kill germs with heat during cooking and how to stop their growth by keeping the food hot or cold. This is called temperature control, and you need thermometers to check food temperatures. There are special thermometers to check foods; there are also special thermometers to check refrigerator temperatures.

### The "Danger Zone"

Bacteria, or other germs, need time, food and moisture (or wetness) to grow; but they won't grow when the temperature of the food is **colder than 45° F (7° C) or hotter than 140° F (60° C)**. The temperatures in between 45° and 140° are in the "Danger Zone." Keep potentially hazardous foods out of the "Danger Zone!" For example, when food is left in the "Danger Zone", bacteria can grow fast, and make poisons that can make your customers and family very sick.

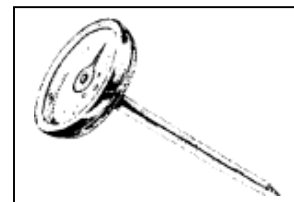


## Preparing food

- Wash your hands.
- No barehand contact. Use barriers such as tongs, papers, spoons or gloves to prepare and serve ready-to-eat foods.
- Get the food to be fixed from storage, the stove, the cooler or freezer. Take a little food out at a time, and keep the rest hot or cold until you are ready to work with it. Prepare potentially hazardous foods just before you need them.
- Don't let the temperature of the food stay in the "Danger Zone."

## Cooking food

Use a metal stem thermometer to check temperatures while cooking food to make sure that it gets done all the way inside. Different foods have to reach different temperature degrees to be done or safe. The metal stem thermometer measures the inside, or internal, temperature of the food. A thermometer that works best shows a range of 0° F to 220° F (0° C to 104° C). The only way you can be sure that the food is cooked enough is to use a metal stem thermometer placed in the center of the food, even if you also use a thermostat to control the temperature in the oven.



## When is the food cooked safe?

Here are a few examples of potentially hazardous food and how hot they must be to be safe. They can be hotter, but they must be at least this hot to kill germs:

- Poultry and Stuffing: 165° F (74° C)
- Pork: 150° F (66° C)
- Beef, Lamb, Fish and Seafood: 140° F (60° C)
- Rare Beef: 130° F (54° C)
- Hamburger (ground beef): 155° F (68° C)

You must place the thermometer in the thickest part of the meat or in the center of the food to get a true reading. (Do not touch a bone with the stem of the thermometer.)

All poultry, all food made from poultry, all stuffed meats, and the stuffing in them must reach 165° F or hotter to destroy Salmonella and other bacteria.

Hamburger (ground beef) must be cooked to 155° F. This includes all kinds of hamburger such as taco meat and meatloaf, as well as hamburger patties.

Pork and all foods made from pork must cook to at least 150° F to prevent trichinosis, a very serious illness.

Fish, seafood's, all foods made with seafood, and all other meats, such as beef and lamb, must be cooked to 140° F or hotter to kill the bacteria that cause foodborne illness. Some people like rare beef, and this is the one meat that can be cooked to only 130° F if it is served right away. No raw meat is really safe to eat.

Never cook large roasts, turkeys or stuffed turkeys while they are still frozen. Their big size keeps the insides from cooking to a safe temperature. You must thaw them first so the heat can reach the center of the meat faster.

Microwave ovens do not cook evenly; you must stir and turn the food while it cooks to make sure it cooks to the same temperature in every part. Check the food with a metal stem thermometer before you serve it. (Do not keep the thermometer in the food while it is cooking in the microwave oven.)

## How cold is cool? How hot is warm?

Between the time you cook the food and you put away the cooked food in a cooler or freezer, its temperature can fall into the "Danger Zone." You will learn about how to keep cooked foods hot, **hot holding**, and how to reheat cold food. You will also learn how to get cooked foods cool, and how to keep food cold, **cold holding**. We begin with cooling hot food the right way.

## Cooling

You always take a chance when you have to cool down food. The best way to have safe food is to make it fresh each day, just before you serve it. If you have food that is leftover or made in advance, you must cool it and store it safely. The first rule to remember about cooling: Cool hot food as fast as you can to 45° F (7° C) or below, past the "Danger Zone."

**Food that is not cooled fast enough is one of the leading causes of food borne illness.**

## Cooling solid and soft foods

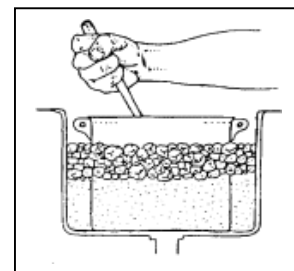
Here are the six steps to cool solid and soft foods such as meats, refried beans, rice, potatoes, casseroles, stews, chili and thick soups or chowders:

1. Wash your hands.
2. Before you put away any food, you must place it in shallow metal pans, with the food no more than 2 inches deep. For very thin soups or stocks you may cool foods in pans 4 inches deep.
3. Cut large roasts and turkeys into pieces no larger than 4 pounds.
4. Put all meats and other hot food in the cooler or refrigerator as quickly as you can, right away; **do not let the food sit at room temperature for more than 30 minutes.**
5. Do not stack pans; leave space for air to move around them.
6. Wait until the food has cooled to below 45° F before you cover it.

## Cooling liquid foods

When you cool thin soup, sauces and gravy, you can use shallow 4-inch metal pans, or you can use the ice and water method, called an "ice bath". Remember, you want the food to cool as fast as possible to below 45° F.

For shallow pan cooling, quickly put the hot food in metal pans that are wide with low sides; the food must be no more than 4 inches deep. Do not cover the food until it has cooled to 45° F in the refrigerator. It may be hard to carry a shallow pan with thin soup in it. The ice bath method works well for this job. Here are nine steps you take to cool food with an ice bath:



1. Wash your hands.
2. Close the drain in a large sink. Place the metal pot or pan of hot food in the sink.
3. Fill the sink with ice up to the level of food in the pot.
4. Add cold water to the ice.
5. Stir the soup or sauce often so that it cools all the way to the center.
6. Add more ice as the old ice melts.



7. Check the food temperature with the metal stem thermometer. (Clean the thermometer stem after each use.)
8. Be sure you have cooled the food from 140° F to under 45° F in less than 4 hours.
9. Put the cooled foods into the refrigerator or freezer.

Each refrigeration unit, cold table or cooler must have its own thermometer that gives a true measure of how cold the air is, but you must also check the food with a metal stem thermometer. Air in the cooler must be able to move around the food, so the pans and dishes need to have space between them; do not crowd them.

## Cold holding

For cold holding, do not let food stand at **room temperature** because that will allow germs to grow. Store foods in a refrigerator, refrigerated display case, in ice, or other approved method. Always cold hold foods at 45° F or less. Fish, shellfish, poultry, milk and red meat will stay fresh longer if you cold hold them below 40° F (4° C). Use the metal stem thermometer to check the food in cold holding, for example, in salad bars, areas where you prepare food, and in coolers. If you use ice to keep the food cold on a salad bar or food display, be sure that the ice comes up to the level of the food that is in the pan or dish. **Food must be colder than 45° F when you put it in the ice.** Cold hold foods at 45° F or less.

## Thawing frozen food

There are only three safe ways to thaw foods, and you must plan ahead to allow enough time to do it right:

1. Thaw food in the refrigerator; it may take a few hours or a few days. This is the best and safest way. Be sure to put meat in a container to catch the meat juices and to keep them from dripping on the food below.
2. Hold the food under cool, running water, never under warm or hot water.
3. In a microwave oven; you must then cook it or serve it right away.

Never thaw food at room temperature, on a counter or in warm water. These methods let harmful bacteria grow to high numbers (the "Danger Zone").

## Some special rules for cold salads and sandwich spreads

You have learned about potentially hazardous food, and how the bacteria grow very easily in them. These foods must not be left at room temperature for even a short time. Foods like potato salad; pasta or macaroni salad egg salad and chicken salad has to be cold enough to keep germs from growing. When you make these foods, start with cold ingredients.

- Wash your hands before handling the salad ingredients.
- Make cold salads with cold cooked foods such as potatoes, pasta, chicken and eggs; all ingredients should be chilled to 45° F.

If you wonder about keeping something cold, keep it cold while you check with a supervisor, the boss or the Health Department.

## Hot holding

After the food is cooked and ready to serve, keep it warm enough to stop any germs from growing. There is special equipment for this. You must turn on steam tables, soup warmers, and heated surfaces before you need them so that they will be hot enough when you put the cooked



food into them. Set the temperature control a little above 140° F, and then check the food with your metal stem thermometer to make sure the food **stays** at least at 140° F at all times. Stir liquid foods (like soups and gravies) so they don't get cold on top. Covers on the pans will help to keep the heat in and the food warm enough. Do not try to heat cold foods in these warmers. **Hot hold food above 140° F.**

## Reheating

Food that is cooked and then cooled may need to be heated again. When you must reheat food, do it very quickly (within one hour) to 165° F (74° C). The right way to do this is on the stove burners, or in microwave ovens, convection ovens, or double boilers. Do not use anything that will heat the food slowly, because it takes too long to pass the "Danger Zone." Stir the food to be sure that all parts of it are hot. Then use your metal stem thermometer to check the temperature.

**Reheat foods to 165° F.**

## What about food left at the table?

When a customer leaves food on a plate or at the table, you must throw it away. If you have food like chips, rolls and bread and some of it is left over, you cannot serve it again. **Unopened** packages of crackers, jelly, candy or sugar may be served again.

## When the equipment breaks down or power goes off

If the electric power goes off, if the water supply is damaged, if there is no hot water, if the sewer or waste system backs up in the drains:

- Close the business right away.
- Call the Health Department for help and advice.

If something goes wrong with the stove, the refrigerators, the freezers, the steam tables, salad bar or display coolers, any equipment that keeps the food safe to serve, you must think and act quickly:

- Be sure potentially hazardous hot foods stay hot (at least 140° F or more).
- Be sure potentially hazardous cold foods stay cold (at least 45° F or colder).

If a refrigerator does not work right, the temperature of the food in it can reach the "Danger Zone." Before you move the food to another cooler check its temperature with the metal stem thermometer. If it is still colder than 45° F (7° C), move it quickly to a cooler or refrigerator that is OK.

If a freezer lets food thaw, check the food temperature with a metal stem thermometer. You can prepare the food, if it is still colder than 45° F.

If hot holding equipment like a steam table or soup warmer fails, measure the temperature of the food it was holding. If the food is still hotter than 140° F (60° C), you have two choices:

- Move the hot food to equipment that is OK and that will keep it hot.
- Cool the food quickly using shallow metal pans or an ice bath.

You must throw out food that has gotten warmer than 45° F or cooler than 140° F. Do not serve it and do not give it to staff, family or shelters. Call your local Health Department office for help and advice.

## » Use wholesome food

You want all the food in your store or restaurant to be healthy and safe right from the start. This section talks about where the food comes from, how to check it, how to store it and how to handle it.

### Where did that food come from?

Use food that comes from sources that are approved by the Public Health Department--that's the law. Look for "USDA" on meats. Look for "Pasteurized" on milk. Look for certification numbers on the package of shellfish. Canned foods, fresh foods and dairy products must come from companies, brokers or dairies that have been inspected and are clean.

You cannot sell food that has been prepared at someone's home. Food for the public must be prepared in a kitchen approved for that purpose. People trained by the Public Health Department, Food Inspectors, must check the kitchen to make sure you prepare and store the food in a safe way.

- Check the food as it comes in. It's a good idea to write the date on it before you store it.
- Look for unsafe or adulterated foods. Moldy food, smelly meat, damaged or swollen cans are not safe to use. If you are not sure, get rid of it. Remember the rule: "If in doubt, throw it out."
- Tell your boss about any bad food you find.

### Good food needs good storage

- Keep all foods off of the floor.
- Rotate the stock by storing foods so you can use older food first. "First in, first out" is a good rule to follow.
- Cover, label and date dry foods.
- Store foods away from cleaners and poisons.
- Be careful about storing food in galvanized cans or other containers with metal coatings. (Some foods can "pull off" the metal and that can cause poisoning.) If plastic bags are used, they must be approved for food use.

Take special care of foods that go in the refrigerator or freezer.

- Store food in clean, safe containers with labels and dates.
- Check the temperature: Freezers need to be at least 0° F (-18° C).
- Put **raw** meat on the lowest shelf and unwashed food **below** clean cooked food.
- Refrigerators need to be 45° F (7° C) or colder. Dairy products and meat will keep longer at 40° F (4° C). Seafood will keep longer at 30° (-1° C).

Remember the "Danger Zone" begins above 45° F. Be sure that thermometers give true temperatures in the refrigerators.

### Keep foods safe from cross-contamination

As a food handler you must prevent cross contamination. Cross contamination happens when germs from raw or unclean foods get into foods that are ready to serve or that will not be cooked again before you serve them. Here are some important ways that you can prevent cross contamination:

- In the refrigerator: Don't let raw meat, fish or poultry drip onto foods that will not be cooked before serving.
- Wash your hands between handling raw meat and foods that will not be cooked before eating.
- Store **raw** meat, fish, and poultry on the **lower** shelves of the refrigerator.
- Never store foods that will not be cooked before serving in the same container as raw meat, fish, or poultry.
- Use a hard cutting surface or a board, with no splits or holes where germs can collect. It is easier to really clean that kind of surface well.
- Wash, rinse, and sanitize the cutting surface and all the utensils and knives **every** time you finish cutting raw meat, fish, or poultry.

### Keep foods safe from contamination

- Wash your hands before handling food.
- Wash, rinse, and sanitize the cutting surface and all the utensils and knives every time you finish with a job or between preparing different foods.
- Use utensils to mix food. .
- Use a clean spoon or fork to taste food and do not reuse it until you sanitize it. You need to be careful with bulk foods.
- Store bulk foods in covered bins and containers.
- You and customers should use utensils with bulk foods. Tongs and scoops work well.

### What can you add to food?

Chemicals that you add to food as you prepare it are food additives.

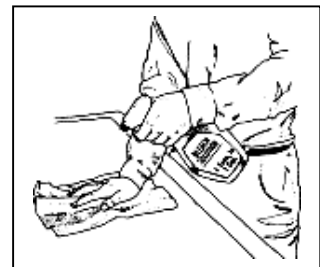
You cannot add sulfiting agents to food at a store or restaurant. In the state of Washington there is a law against adding these chemicals at the retail level. You cannot use ingredients for freshening or whitening if they contain sulfiting agents.

Some people are allergic to sulfites. Employees in food service should learn what menu items have sulfites, so they can tell their customers who ask.

If anyone complains about getting sick from food additives, you or your supervisor must report it to the Health Department.

### » A clean workplace is safer

It takes more than soap and water to keep a food business clean and safe. It also takes chemicals and care to use them the right way. You want to be safe and you want to get the job done in a safe way for your customers. Some of the chemicals you will need are detergents, sanitizers and pesticides. These help stop germs dead in their tracks.



### These are very important rules:

- Know what the directions say for using chemicals. Read the labels and talk to your boss about when to use them and how much to use. **Be sure you really understand the directions!**
- Keep all chemicals away from food. You must put them **below** food, never on a shelf above food, or above any area where you fix food.

- Can you tell what the labels say? Are they easy to see? They must be. If they are not, tell the boss. Mark them clearly with ink that lasts.
- Keep all chemicals in the bottles or boxes they come in. If you put them in a different container, label them clearly.

### How to get it clean and keep it clean

- Use wiping cloths to clean counter tops, tables, cutting boards and equipment. Rinse the wiping cloth in a sanitizing water mix of **1-teaspoon bleach and one gallon of cool water**; do not add soap to this mix. (If you use another kind of sanitizing mix, be sure it is approved by the Public Health Department. Change the sanitizing mix often; do not let it become dirty.
- Clean and sanitize whenever there is a chance of cross contamination. Sanitize at the start and end of the workday. Clean during your shift as soon as you see a spill.
- Wash, rinse and sanitize each surface that touches food, for example, a meat slicer or grinder and cutting boards. Sanitize equipment after each use. Follow the directions on the equipment so that you can get into all the spaces where germs can grow.

### The right way to wash dishes by hand

Dishes, utensils and equipment that touch food must be washed in five steps. This is the **only** way you can wash dishes by hand. You must **wash, rinse and sanitize** them in a three-sink unit. These are the five steps for the right way to wash dishes by hand:

1. Scrape leftover food and grease from the dishes and throw it away.
2. In the **first sink**, wash the dishes with hot water and detergent.
3. In the **second sink**, rinse them with clean warm water.
4. In the **third sink**, sanitize the dishes to destroy bacteria. Sanitizers may be chlorine bleach or other chemicals approved by the Public Health Department. For example, use one teaspoon of bleach for each gallon of cool water in the sink.
5. Air-dry the dishes and utensils. Do not use a towel to dry them.

### The right way to wash dishes in a dishwasher

Your business may have a commercial dishwasher. This dishwasher will wash, rinse, and sanitize dishes, equipment, and utensils. There are 3 steps you must use to wash dishes by machine:

1. Scrape leftover food and grease from the dishes and throw it away.
2. Load dishes into the machine and run the full cycle.
3. Air-dry the dishes and utensils. Do not use a towel to dry them.

The commercial dishwasher uses the sanitizing chemicals in the final rinse, or the water is very hot. At the end of the day, clean the dishwasher and check the spray holes and traps to remove bits of food.

### Don't set it down -- put it away!

Now that everything is clean and dry, put them away in storage areas that are also clean and dry. This will protect them from contamination. Keep equipment and utensils off of the floor, away from drains, water lines and open stairs. Put things away carefully and quickly; do not let them sit on counters and tables where they will be handled and moved around.

Cups and glasses should be put away upside down on clean surfaces. When you pick them up again, do not touch the rims. When you put away eating utensils (forks, spoons and knives), touch only the handles, and protect the parts that contact food.

A good habit to practice at work and at home is to handle utensils, dishes and glassware as little as possible to prevent the transfer of germs.

Storing utensils while they are being used: Utensils that are in continuous use may be stored in a running water dipperwell, in hot water, in ice water, or in the food with the handle sticking out of the food.

Or, they can be stored clean and dry between uses.

## Cleaning never stops

There should be a daily schedule for cleaning so that no area is forgotten. Complete cleaning of walls, ceilings, and mopping and sweeping of floors should be done when there is the least amount of food around, such as after closing or between busy times. However, you should clean work surfaces, tables, and equipment as they are used. Cleaning as you go will help reduce the chance for cross contamination. You and the other employees will be safer too if everything is kept clean and in the proper place.

**After cleaning wash your hands before handling food.**

## Pests

Cockroaches, flies, weevils, mice and rats are some of the pests that can get into a food business. Don't let them in, and don't let them eat.

Some of the ways to keep pests out is to clean the entire place often on a regular schedule. Use screendoors, and cover small holes where mice and rats can get in. Cover garbage with lids that fit well and remove garbage often. Keep the areas around garbage containers clear of trash and litter.



If pests become a real problem, a licensed pest control service may need to help solve it. If food workers have to use pesticides, **be very careful with them**. Pesticides are poison that kill rodents and insects, but they can also poison humans. Read the directions on the can or box; or have your boss read them to all of the staff. Be sure you understand how to use pesticides. (See section above on storing chemicals.)

Before using pesticides, put away all food, and cover the work surfaces. Be sure that the pesticides you use are approved for use by food workers. Let the Public Health Department help you deal with pest control questions.

## » Key points

All of the information you have learned to become a food and beverage worker will help you and your family stay healthy too. Take this time to review the key ideas.

1. Wash your hands often, and wash them well.
2. Work only when you are healthy, not when you are sick.
3. Prevent food poisoning by keeping food out of the "Danger Zone," the temperatures in between 45° F and 140° F.

4. Cook foods until they reach proper temperatures.
5. Keep food safe from cross contamination with careful storage and sanitizing.
6. Store chemicals for cleaning and pest control away from food, utensils and equipment.
7. Keep your workplace clean and safe. This will help keep you safe and well.

## What to do if you see something wrong at work

You may see a problem at work and when you check this book you learn the right way to manage it. You will have to decide what to do next. You have some choices.

- You can take action yourself to correct it.
- You can tell your boss about it, and together you can take steps to correct it. If the problem continues, you and the boss can call the Public Health Department to help figure out a way to solve the problem. Remember, a problem is easier to fix in the beginning before it grows too big and expensive. The health of your customers, the staff and yourself is the most important factor to think about. Don't ignore the problem.

This information is available as a booklet called "Working Healthy". If you want a copy of this booklet, pick one up when you get your Food Workers card or ask your food inspector for one.

## » First aid for choking

1. Ask: Are you choking?
2. If a victim cannot breathe, cough, or speak.
3. Give the Heimlich Maneuver.
  - Stand behind the victim.
  - Wrap your arms around the victim's waist.
  - Make a fist with one hand. Place your fist (thumbside) against the victim's stomach in the midline just above the navel and well below the rib margin.
  - Grasp your fist with your other hand.
  - Press into stomach with quick upward thrust.
4. Repeat thrust if necessary.



## » Definitions

- **Adulterated**  
Something unneeded has been added to or has grown in the food to contaminate it.
- **Bacteria**  
A germ with only one cell. There are many different kinds; but many can cause illness when they grow and multiply.
- **Barriers**  
Barriers for ready –to-eat foods\* are utensils that protect the food being touched by bare hands.
- **Bulk foods**  
Foods sold in large amounts in big containers, usually not in packages.
- **Certification**  
Legal proof that something has been inspected and approved as safe.
- **Commercial dishwasher**  
Commercial means "for business." A place of business, like a hospital, a school or a café that serves food to large numbers of people usually uses a dishwashing machine that is different from the kind used at home.
- **Contamination**  
When food has too many germs or something unsafe in it (like chemicals), it is contaminated. It is unsafe.
- **Convection oven**  
An oven with fans that move the hot air around to give more even heat.
- **Cross contamination**  
Food that is contaminated can pass germs to food that is pure. Even when the worker has clean hands, this can happen when surfaces and utensils have germs on them.
- **Dairy**  
Milk and foods made from milk like cream, cottage cheese, soft cheese; foods that are used instead of milk products, like liquid "non-dairy" creamer.
- **Danger Zone**  
Temperature of food between 45° F (7° C) and 140° F (60° C).
- **Detergents**  
Cleaning powders and liquids that work like soap, but are made in a different way; they have chemicals in them that are not in soap.
- **Environmental Health Services**  
Professional staff who protect the public's health. They do this by inspecting food businesses and by educating and testing workers who handle and prepare food.
- **Food borne illness**  
Sickness from eating food that was not safe; food poisoning.
- **Food Poisoning**  
Illness caused from food that has too many germs or something unsafe in them (like chemicals).
- **Galvanized**  
A steel container coated with zinc, a metal that prevents rust.
- **Hepatitis A**  
A virus that causes liver disease. It spreads when someone has the virus in the feces (or poop). The viruses can get on hands, and then on to food that another person eats. This is one reason to wash your hands well after using the toilet!
- **Ingredients**  
Foods that are part of a mixture; for example, mayonnaise and sugar are ingredients in some salad dressings.



- **Metal stem thermometer**  
It measures the temperature of foods. It has a round top with a long pointed sensor made of steel to stick into the food. Do not use any other kind of thermometer to test the temperature of food.
- **Parasite**  
A tiny animal that lives inside other animals.
- **Pesticides**  
"Cide" mean kill. These chemicals kill pests.
- **Potentially hazardous**  
Possibly unsafe. Some foods can become unsafe if they are left too long at room temperature or in the "danger zone".
- **Poultry**  
Birds raised for meat. Chicken and turkey are the most common kinds of poultry; duck and goose are also sold for food.
- **Ready-to-eat**  
Ready-to-eat foods are any foods that will not be thoroughly cooked or reheated before being served to the customer. Some examples are prepared fresh fruits, cold salads, sandwiches, bread, and garnishes, french fries and ice served to customers.
- **Sanitize**  
Kill germs with chemicals or high heat.
- **Sanitizers**  
Very strong chemicals that kill germs. A good sanitizer is chlorine bleach.
- **Stuffed meats**  
Meat, poultry or fish that has a hole or is wrapped around a filling of soft food, like bread or rice mixed with liquids, then cooked together. Stuffed meats take longer to cook safely than unstuffed meats.
- **Sulfiting agent**  
A kind of salt used to help keep some foods, including meats, looking fresh.
- **Temperature**  
The amount of heat or cold. There are two different ways to measure temperature. In this manual when you see F, read "Fahrenheit", ("fair-n-hite"). That is the way the United States measures temperature; freezing equals 32° F and boiling water equals 212° F. When you see C, read "Celsius" ("sell-see-us"), or "Centigrade." That is the way many countries measure temperature; freezing equals 0° C and boiling water equals 100° C. To change Fahrenheit to Celsius, subtract 32 from the Fahrenheit temperature and divide by 1.8. To convert from Celsius to Fahrenheit, multiply the Celsius degrees by 1.8 and add 32.
- **Thermostat**  
Something that can be set to control the temperature of an oven, a freezer, a cooler, or a heater. Once you set it, it will keep the unit hot or cold at the same temperature (unless it is broken.)
- **Trichinosis**  
A disease caused by eating a parasite, a worm, found in pork that is raw or undercooked. It causes pain, nausea, vomiting and diarrhea.
- **Virus**  
A germ that can live inside of a cell. If given the chance, viruses will multiply enough to cause disease. While some dead viruses can be used to fight disease, there really are no "good" viruses. Soap and hot water will wash away viruses.
- **Wiping cloths**  
Cotton cloth with finished edges that do not come loose. Strong enough to be sanitized after each use and to be washed often in detergent.

## » **Public Health Centers**

Public Health - Seattle & King County services are provided through Public Health Centers located in Seattle and King County. Contact the Center nearest you for more information about services. Not all services are offered at every center.

Most Public Health Centers are open 8:00 AM to 5:00 PM, Monday through Friday. If there is an urgent need for after-hours assistance from the Health Department, call (206) 682-7321.

The following are Public Health Centers, which offer Environmental Health Services for food establishments:

### **Kent / Alder Square Public Health Center**

#### **Environmental Health**

(206) 296-4708 or (206) 296-4666  
1404 South Central Avenue, Suite 101  
Kent, WA 98032

### **Downtown (Seattle) Public Health Center**

#### **Environmental Health**

(206) 296-4632  
2124 Fourth Avenue  
Seattle, WA 98121

### **Northshore Public Health Center**

#### **Environmental Health**

(206) 296-9791  
10808 NE 145th Street  
Bothell, WA 98011

## » **Acknowledgments**

The development of this manual was coordinated by Benjamin Leifer, MPH, CHES, Health Educator, Public Health-Seattle King County. Sharon Greenman, Supervisor, and Jill Trohimovich, Senior Environmental Health Specialist, of the Environmental Health Division of Public Health-Seattle King County, provided technical advice based on their practical experience as inspectors of food service. Clover B. Gowing, PhD, wrote the text based extensively on the State of Washington Food and Beverage Workers' Manual. Material was also adapted from The Health of the Public is in Your Hands: A Guide for Food Service Workers, San Diego (CA) County. The Multnomah County Food Handlers' Manual, prepared by Multnomah County (OR) Environmental Health Section of the Multnomah County Department of Human Services, was useful as an example of a very readable format, and inspired the inclusion of the First Aid material.